A Comparison of Real Output and Productivity for British and American Manufacturing in 1935

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Appendix A: Comparing the British and American Census
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The British enquiry of 1935 covers the whole of Great Britain and Northern Ireland, and includes all industrial operations in the United Kingdom. Following the method adopted at the 1930 census, detailed returns were not obtained from firms employing not more than 10 persons as a yearly average; the only information required from these firms was a statement of the nature of their business and the average number of their male and female employees in the year. From this data Rostas estimated that about 55,200 firms, employing 536,600 persons, were excluded from the U.K. census. The average number of operatives employed during the year, covered by the census, was 4,482,600, whereas the number of administrative, clerical and technical staff employed amounted to approximately 675,000.

The U.S. census covers the 48 contiguous states of the mainland of America and the District of Columbia (thus excluding Alaska and Hawaii), and it represents the calendar year’s 1935 operations. All establishments that had been engaged in manufacturing, printing or publishing during any part of 1935, and whose production during the year had been valued at $5,000 or more, were required to participate in the inquiry. For the U.S. census, the reported average number of operatives and staff employed were 7,346,800 and 1,070,100 respectively. The less stringent exemption levels of the U.K. census allowed for a greater number of small firms to be excluded from the figures for Great Britain, which will undoubtedly influence the levels of comparative productivity. In line with the estimate by Fremdling et al., this would result in a downward bias of average productivity for U.S. manufacturing as a whole vis-à-vis the U.K. of 2 percent at maximum.¹

Even though the terminology employed by the British and the Americans differs slightly, the concepts of gross output, intermediate input and value added are equivalent for both censuses. The gross output is the ex-factory value of products (the selling value at the factory or plants), whereas intermediate input represents the cost of materials, fuel and contract work. The net output, or value added, is the figure which results from the deduction of the intermediate input from the total value of gross output. This figure constitutes the sum of wages, salaries, rent, royalties, rates and taxes, depreciation of plant and machinery, advertisement and selling expenses and all other similar charges, as well as profits.

In some cases, excise duties and consumer taxes were included in the ex-factory value of products. To obtain a comparable measure of productivity at the industry level, we deducted these excises from the value of gross output. For the U.K., we subtracted excises on silk and artificial silk, sugar and glucose, beer, aerated waters, tobacco, chemicals, dyestuffs and drugs, matches and printing. In addition we adjusted the gross output value of tobacco for the U.S. All values of the excise duties

¹ Fremdling et al., ‘British and German’, p. 372.
have been taken from the respective censuses, with the sole exception of the U.K. excise on tobacco, which has been based on the estimate in the study of British and German manufacturing productivity by Fremdling et al.\textsuperscript{2}

\textsuperscript{2} Ibid., p. 374.